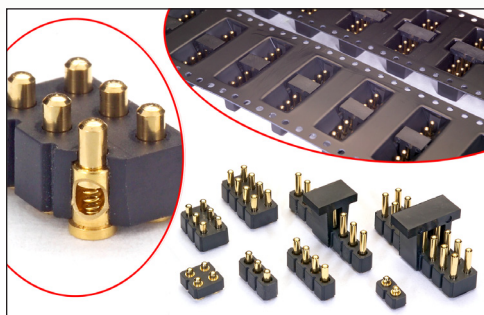


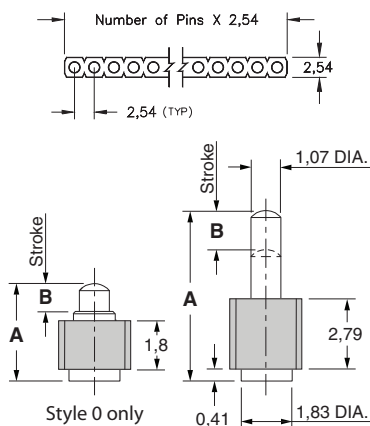
# SPRING-LOADED CONNECTORS

## SERIES 811 & 813 • 2,54 GRID SURFACE MOUNT, LOW PROFILE • SINGLE AND DOUBLE ROW STRIPS

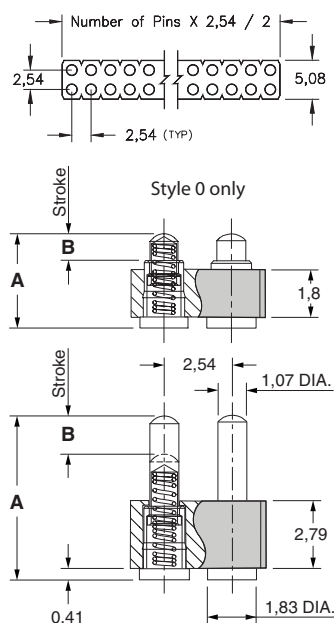


- Modular contacts for use on 2,54 grid, available in five heights from 3,48 to 5,99, supplied in single and double row contact strips
- Precision-machined piston / base and gold-plated components assure a 1,000,000 cycle life durability
- Pistons have a long stroke relative to the low profile of the assembly
- Low resistance, high current contacts are rated at 2 amps continuous, 3 amps peak
- High temperature thermoplastic insulators are suitable for surface mount processes
- Both 811 & 813 series, contact styles 1 through 4, are available on 32mm wide carrier tape and fitted with vacuum pick-up clips for automated pick and place assembly. Tape and Reel packaging per EIA-481. See page 12 for strip lengths available and ordering information

### SINGLE ROW Series 811



### DOUBLE ROW Series 813



## ORDERING INFORMATION

### Single Row Series 811

811-22-0XX-30-00X101  
Specify number of contacts 01-64      Specify contact style 0-4

### Double Row Series 813

813-22-0XX-30-00X101  
Specify number of contacts 04-72      Specify contact style 0-4  
For 811 and 813 Tape & Reel packaging, see page 12

| CONTACT STYLE | INITIAL HEIGHT A | MAX. STROKE B |
|---------------|------------------|---------------|
| 0             | 3,48             | 0,99          |
| 1             | 4,50             | 1,14          |
| 2             | 5,0              | 1,39          |
| 3             | 5,51             | 1,39          |
| 4             | 5,99             | 1,39          |

### Technical Specifications

#### Materials:

Contact piston & base: Machined copper alloy plated 0,51µm gold over 2,54µm nickel  
Spring: Beryllium copper-plated 0,25µm gold  
Insulator: High temperature thermoplastic, rated UL94 V-0

#### Mechanical:

Spring force @ initial height (A): 25 grams  
Spring force @ mid stroke (B/2): 60 grams  
Durability: 1,000,000 cycles  
Coplanarity: 0,13 (Single Row up to 10 pins; Double Row up to 20 pins),  
For higher pin counts, contact Technical Support

#### Electrical:

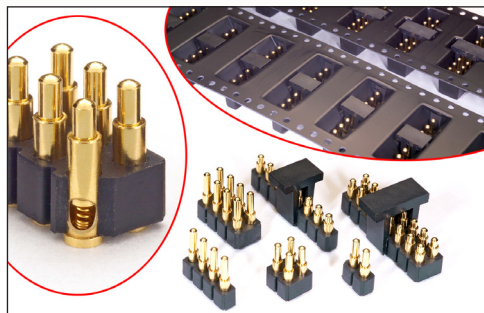
Voltage rating: 100Vrms/150Vdc  
Current rating: 2A (continuous), 3A (peak) per contact  
Contact resistance: 20mΩ max.  
Insulation resistance: 10,000MΩ min.  
Dielectric strength: 700Vrms min.  
Capacitance: 1pF max.

RoHS-2  
2011/65/EU



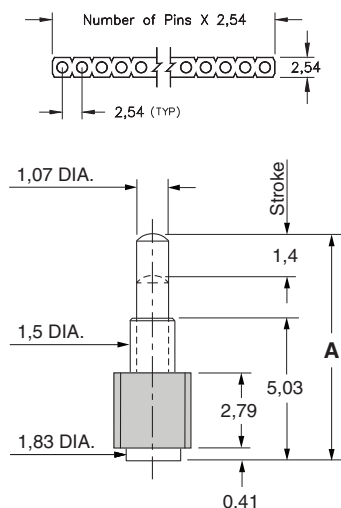
# SPRING-LOADED CONNECTORS

## SERIES 812 & 814 • 2,54 GRID SURFACE MOUNT, MID PROFILE • SINGLE AND DOUBLE ROW STRIPS

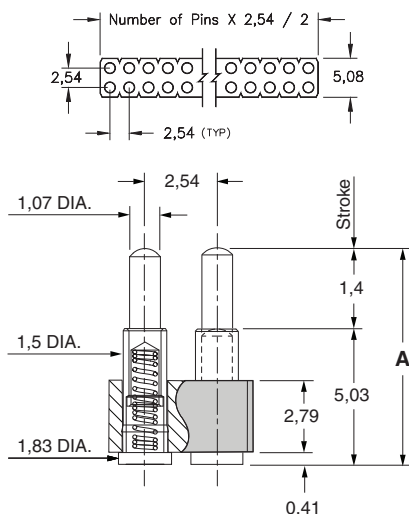


- Modular contacts for use on 2,54 grid, available in ten heights from 6,48 to 10,92, supplied in single and double row contact strips
- Precision-machined piston / base and gold-plated components assure a 1,000,000 cycle life durability
- Extended body provides greater bearing surface for increased strength & plunger protection
- Low resistance, high current contacts are rated at 2 amps continuous, 3 amps peak
- High temperature thermoplastic insulators are suitable for surface mount processes
- Both 812 & 814 series, contact styles 0 through 9, are available on 32mm or 44mm wide carrier tape and fitted with vacuum pick-up clips for automated pick and place assembly. Tape and Reel packaging per EIA-481. See page 12 for strip lengths available and ordering information

### SINGLE ROW Series 812



### DOUBLE ROW Series 814



## ORDERING INFORMATION

### Single Row Series 812

812-22-0XX-30-00X101

Specify number of contacts 02-64

Specify contact style 0-9

### Double Row Series 814

814-22-0XX-30-00X101

Specify number of contacts 04-72

Specify contact style 0-9

For 812 and 814 Tape & Reel packaging, see page 12

| CONTACT STYLE | INITIAL HEIGHT A | CONTACT STYLE | INITIAL HEIGHT A |
|---------------|------------------|---------------|------------------|
| 0             | 6,48             | 5             | 8,89             |
| 1             | 6,99             | 6             | 9,4              |
| 2             | 7,49             | 7             | 9,91             |
| 3             | 8,0              | 8             | 10,41            |
| 4             | 8,51             | 9             | 10,92            |

### Technical Specifications

#### Materials:

Contact piston & base: Machined copper alloy plated 0,51µm gold over 2,54µm nickel  
 Spring: Beryllium copper-plated 10µm gold  
 Insulator: High temperature thermoplastic, rated UL94 V-0

#### Mechanical:

Spring force @ initial height (A): 25 grams  
 Spring force @ mid stroke (0,7): 60 grams  
 Durability: 1,000,000 cycles  
 Coplanarity: 0,13 (Single Row up to 10 pins; Double Row up to 20 pins),  
 For higher pin counts, contact Technical Support

#### Electrical:

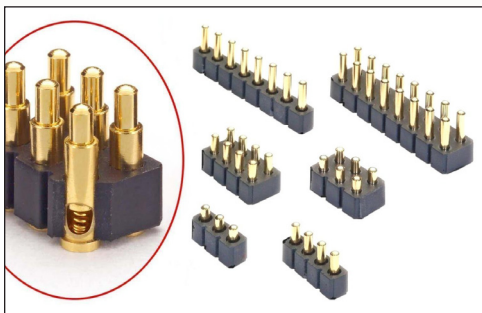
Voltage rating: 100Vrms/150Vdc  
 Current rating: 2A (continuous), 3A (peak) per contact  
 Contact resistance: 20mΩ max.  
 Insulation resistance: 10,000MΩ min.  
 Dielectric strength: 700Vrms min.  
 Capacitance: 1pF max.

RoHS-2  
2011/65/EU



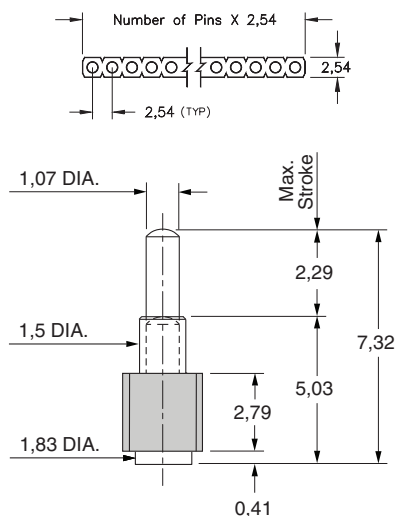
# SPRING-LOADED CONNECTORS

## SERIES 819 & 820 • 2,54 GRID SURFACE MOUNT, LONG STROKE • SINGLE AND DOUBLE ROW STRIPS

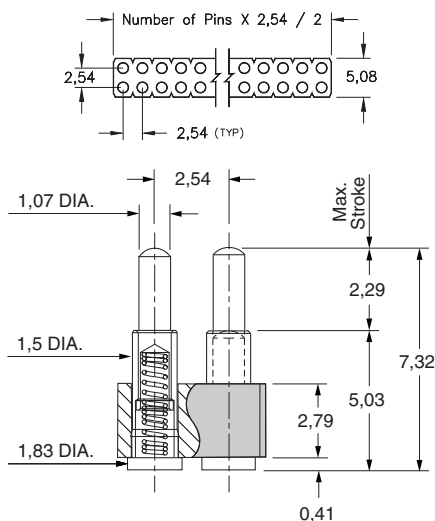


- Modular contacts for use on 2,54 grid, available in a height of 7,32, supplied in single and double row contact strips
- Precision-machined piston / base and gold-plated components assure a 1,000,000 cycle life durability
- Pistons have a 1,14 mid. stroke and a 2,29 max. stroke
- Low resistance, high current contacts are rated at 2 amps continuous, 3 amps peak
- High temperature thermoplastic insulators are suitable for surface mount processes
- Both 819 & 820 series contact strips are designed for placement onto a Ø 2,08 solder pad prior to reflow soldering
- Tape and Reel packaging available, contact Technical Support

### SINGLE ROW Series 819



### DOUBLE ROW Series 820



## ORDERING INFORMATION

### Single Row Series 819

819-22-0XX-30-001101

Specify number of contacts 01-64

### Double Row Series 820

820-22-0XX-30-001101

Specify number of contacts 04-72

## Technical Specifications

### Materials:

Contact piston & base: Machined copper alloy plated 0,51 µm gold over 0,25 µm nickel  
 Spring: Beryllium copper-plated 0,25 µm gold  
 Insulator: High temperature thermoplastic, rated UL94 V-0

### Mechanical:

Spring force @ initial height: 25 grams  
 Spring force @ mid stroke (1,14): 60 grams  
 Durability: 1,000,000 cycles

### Electrical:

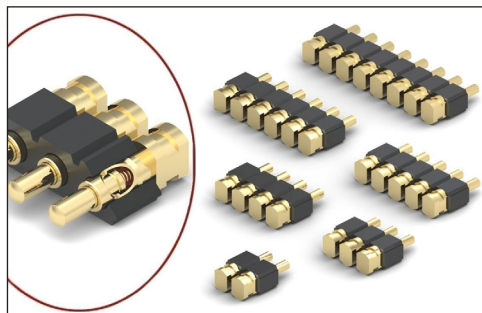
Voltage rating: 100Vrms/150Vdc  
 Current rating: 2A (continuous), 3A (peak) per contact  
 Contact resistance: 20mΩ max.  
 Insulation resistance: 10,000MΩ min.  
 Dielectric strength: 700Vrms min.  
 Capacitance: 1pF max.

RoHS-2  
2011/65/EU



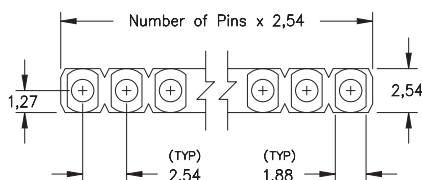
# SPRING-LOADED CONNECTORS

## SERIES 810 • 2,54 GRID HORIZONTAL SURFACE MOUNT • SINGLE ROW STRIPS

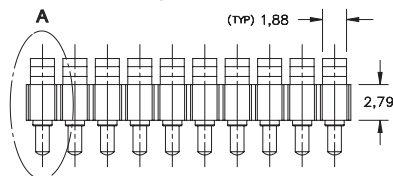


- Modular contacts for use on 2,54 grid, supplied in single row contact strips. Piston action is parallel to the board surface
- Ideal for daisy chaining of P.C.B's when mated with right angle target connectors (series 399...10-008) or for mating boards in a perpendicular orientation
- Precision-machined piston / base and gold-plated components assure a 1,000,000 cycle life durability
- Pistons have a 1,14 mid. stroke & 2,29 max. stroke
- Low resistance, high current contacts are rated at 2 amps continuous, 3 amps peak
- High temperature thermoplastic insulators are suitable for surface mount processes
- 810 series contact strips are designed for manual placement onto solder pads

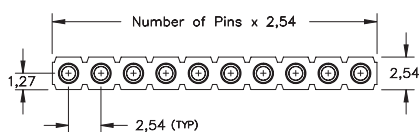
### SINGLE ROW Series 810



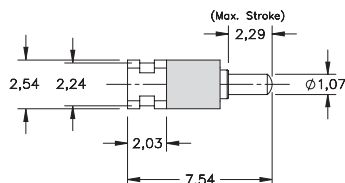
#### TOP VIEW



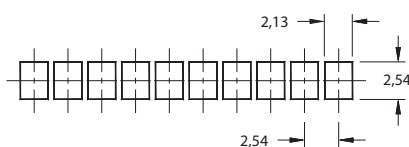
#### FRONT VIEW



#### DETAIL 'A'



### Suggested P.C.B. FOOTPRINT



Coplanarity 0,13. For Pin Counts > 10 positions consult Technical Support

## ORDERING INFORMATION

### Single Row Series 810

810-22-0XX-40-001101

Specify number of contacts 01-10

### Technical Specifications

#### Materials:

Contact piston & base: Machined copper alloy plated 0,51µm gold over 2,54µm nickel  
Spring: Beryllium copper-plated 0,25µm gold  
Insulator: High temperature thermoplastic, rated UL94 V-0

#### Mechanical:

Spring force @ initial height: 25 grams  
Spring force @ mid stroke (1,14): 60 grams  
Durability: 1,000,000 cycles

#### Electrical:

Voltage rating: 100Vrms/150Vdc  
Current rating: 2A (continuous), 3A (peak) per contact  
Contact resistance: 20mΩ max.  
Insulation resistance: 10,000MΩ min.  
Dielectric strength: 700Vrms min.  
Capacitance: 1pF max.

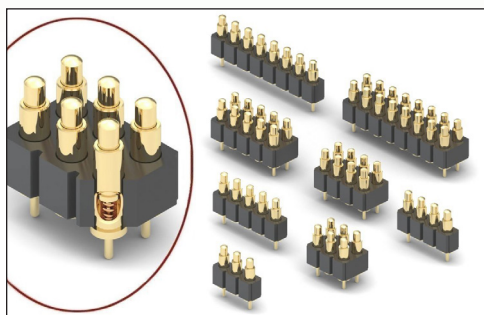
RoHS-2  
2011/65/EU



Mill-Max Mfg. Corp. • 190 Pine Hollow Road, P.O. Box 300, Oyster Bay, NY 11771 • 516-922-6000 • Fax: 516-922-9253 • www.mill-max.com

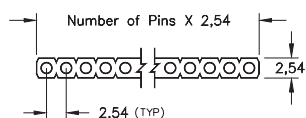
# SPRING-LOADED CONNECTORS

## SERIES 812 & 814 • 2,54 GRID SURFACE MOUNT WITH ALIGNMENT PINS • SINGLE AND DOUBLE ROW STRIPS

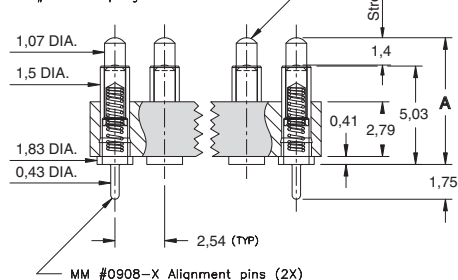


- Modular contacts for use on 2,54 grid, available in ten heights from 6,48 to 10,92, supplied in single and double row contact strips
- Precision-machined piston / base and gold-plated components assure a 1,000,000 cycle life durability
- Pistons have a 0,7 mid stroke & 1,4 max. stroke
- Low resistance, high current contacts are rated at 2 amps continuous, 3 amps peak
- High temperature thermoplastic insulators are suitable for surface mount processes
- Both 812 & 814 series contact strips are designed for manual placement,  $\varnothing 0,56 \pm 0,08$  plated through-holes in the circuit board are required for the alignment pins prior to intrusive reflow soldering

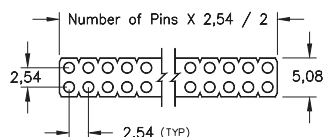
### SINGLE ROW Series 812



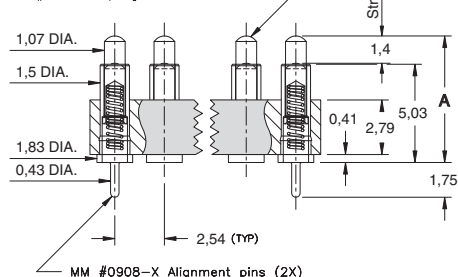
MM #0907-X Spring Loaded Connector



### DOUBLE ROW Series 814



MM #0907-X Spring Loaded Connector



## ORDERING INFORMATION

### Single Row Series 812...01X101

812-22-0XX-30-01X101

Specify number of contacts 03-64

Specify contact style 0-9

### Double Row Series 814...01X101

814-22-0XX-30-01X101

Specify number of contacts 06-72

Specify contact style 0-9

| CONTACT STYLE | INITIAL HEIGHT A | CONTACT STYLE | INITIAL HEIGHT A |
|---------------|------------------|---------------|------------------|
| 0             | 6,48             | 5             | 8,89             |
| 1             | 6,99             | 6             | 9,4              |
| 2             | 7,49             | 7             | 9,91             |
| 3             | 8,0              | 8             | 10,41            |
| 4             | 8,51             | 9             | 10,92            |

## Technical Specifications

### Materials:

Contact piston & base: Machined copper alloy plated 0,51  $\mu$ m gold over 2,54  $\mu$ m nickel  
 Spring: Beryllium copper-plated 0,25  $\mu$ m gold  
 Insulator: High temperature thermoplastic, rated UL94 V-0

### Mechanical:

Spring force @ initial height (A): 25 grams  
 Spring force @ mid stroke (0,7): 60 grams  
 Durability: 1,000,000 cycles

### Electrical:

Voltage rating: 100Vrms/150Vdc  
 Current rating: 2A (continuous), 3A (peak) per contact  
 Contact resistance: 20m $\Omega$  max.  
 Insulation resistance: 10,000M $\Omega$  min.  
 Dielectric strength: 700Vrms min.  
 Capacitance: 1pF max.

RoHS-2  
2011/65/EU

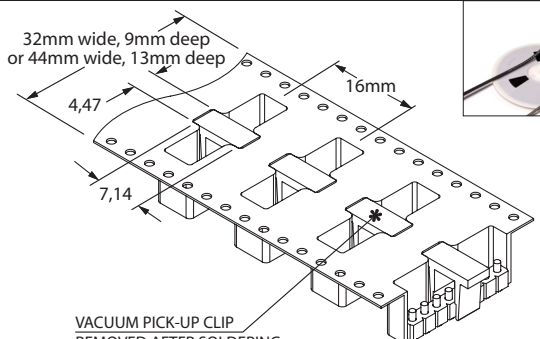
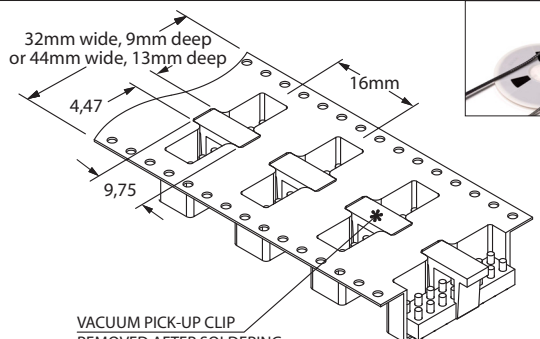




# SPRING-LOADED CONNECTORS

## SERIES 811, 812, 813, 814 • 2,54 GRID SURFACE MOUNT • CARRIER TAPE AND PACKAGING

### Ordering Information for Series 811/812/813/814 in Carrier Tape

| Single Row Series 811                                                                                                                                    | Double Row Series 813                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>811-22-0XX-30-00X191</p> <p>Specify contact style 0-4</p> <p>Specify number of contacts 02-08</p> <p>( 32mm wide tape, 400 parts per 330mm reel )</p> | <p>813-22-0XX-30-00X191</p> <p>Specify contact style 0-4</p> <p>Specify number of contacts 04-16</p> <p>( 32mm wide tape, 400 parts per 330mm reel )</p> |
| Single Row Series 811                                                                                                                                    | Double Row Series 813                                                                                                                                    |
| <p>811-22-0XX-30-00X191</p> <p>Specify contact style 1-4</p> <p>Specify number of contacts 09-12</p> <p>( 44mm wide tape, 200 parts per 330mm reel )</p> | <p>813-22-0XX-30-00X191</p> <p>Specify contact style 1-4</p> <p>Specify number of contacts 18-24</p> <p>( 44mm wide tape, 200 parts per 330mm reel )</p> |
| Single Row Series 812                                                                                                                                    | Double Row Series 814                                                                                                                                    |
| <p>812-22-0XX-30-00X191</p> <p>Specify contact style 0-2</p> <p>Specify number of contacts 02-08</p> <p>( 32mm wide tape, 400 parts per 330mm reel )</p> | <p>814-22-0XX-30-00X191</p> <p>Specify contact style 0-2</p> <p>Specify number of contacts 04-16</p> <p>( 32mm wide tape, 400 parts per 330mm reel )</p> |
| Single Row Series 812                                                                                                                                    | Double Row Series 814                                                                                                                                    |
| <p>812-22-0XX-30-00X191</p> <p>Specify contact style 0-2</p> <p>Specify number of contacts 09-12</p> <p>( 44mm wide tape, 200 parts per 330mm reel )</p> | <p>814-22-0XX-30-00X191</p> <p>Specify contact style 0-2</p> <p>Specify number of contacts 18-24</p> <p>( 44mm wide tape, 200 parts per 330mm reel )</p> |
| Single Row Series 812                                                                                                                                    | Double Row Series 814                                                                                                                                    |
| <p>812-22-0XX-30-00X191</p> <p>Specify contact style 3-9</p> <p>Specify number of contacts 02-12</p> <p>( 44mm wide tape, 200 parts per 330mm reel )</p> | <p>814-22-0XX-30-00X191</p> <p>Specify contact style 3-9</p> <p>Specify number of contacts 04-24</p> <p>( 44mm wide tape, 200 parts per 330mm reel )</p> |
|  <p>VACUUM PICK-UP CLIP REMOVED AFTER SOLDERING</p>                   |  <p>VACUUM PICK-UP CLIP REMOVED AFTER SOLDERING</p>                  |